REMARKS

Claims 1-6 and 8-72 are pending in the present application. Claims 5, 6, 8, 9, 11, 14, 15, and 17-72 have been previously withdrawn from consideration. Claim 7 has been previously cancelled.

Claims 1-4, 10, and 13 have been deemed allowable by the Examiner.

By way of the present amendment, claim 12 has been amended as have certain sections of the specification. Claims 5, 6, 8, 9, 11, 14, 15, and 17-72 are cancelled herein.

Allowance of claims:

Applicants acknowledge the Examiner's withdrawal of previously raised rejections based upon 35 U.S.C. § 102(b). Applicants thank the Examiner for the allowance of claims 1-4, 10, and 13.

Amendments to Claims

Claim 12 has been amended to recite "said nucleic acid is the sequence of SEQ ID NO: 8" to distinguish the claimed subject matter from that claimed in claim 16. Support for this amendment is found on page 13, lines 13; page 30, lines 9-10; page 51, lines 26-27; page 57, lines 20-22, and Figure 22D in the specification.

No new matter is added by way of this amendment.

Amendments to the specification:

The specification has been amended to replace the paragraph on page 47, from lines 17-31 to properly identify SEQ ID NO: 5 as corresponding to the full length amino acid sequence of HIV-2/VCP gp120.

Support for this amendment if found on page 54, lines 26-28; in Figure 21C, and in the sequence listing accompanying the instant specification.

The specification has been further amended to correct typographic errors in the two paragraphs beginning on page 56, lines 30-31 and continuing on page 57, lines 1-19 which incorrectly recite polypeptide sequences instead of nucleic acid sequences. Accordingly, the paragraphs have been amended to recite the nucleic acid sequences SEQ ID NO: 8, SEQ ID NO:

14, SEQ ID NO: 26: and SEQ ID NO: 20, in place of the polypeptide sequences SEQ ID NO: 11, SEQ ID NO: 17, SEQ ID NO: 29: and SEQ ID NO: 23, respectively.

Support for this amendment is found on page 57, lines 20-23; page 57, lines 25-28; Figure 22D (SEQ ID NO: 8), Figure 22C (SEQ ID NO: 11); Figure 23D (SEQ ID NO: 14); Figure 23C (SEQ ID NO: 17); Figure 19D (SEQ ID NO: 26): Figure 19C (SEQ ID NO: 29): Figure 24D (SEQ ID NO: 20); Figure 24C (SEQ ID NO: 23) and the sequence listing accompanying the instant specification.

No new matter is added by way of these amendments.

Rejection of claims 12 and 16 under 35 U.S.C. § 112, second paragraph

Claims 12 and 16 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Examiner alleges that it is not clear what the difference in scope is between the two claims. Applicants hereby amend claim 12 to recite "said nucleic acid is the sequence of SEQ ID NO: 8" to distinguish the claimed subject matter from that claimed in claim 16.

The Examiner has requested clarification as to whether SEQ ID NO: 11 comprises a deletion in the hypervariable region in addition to compensatory mutations and has requested Applicants identify the compensatory mutations within SEQ ID NO: 11. Applicants respond as follows:

The parental VCP polypeptide sequences (SEQ ID NOs: 4 (env), 5 (gp120), and 6 (gp41)) are the basis for which numbering is assigned for all the clones. The p16.5 clone has large deletions relative to the parental VCP sequence that, as a result, change the numbering of the clone after the deletions. As described on pages 54, lines 25-28, the numbers for the p16.5 residues are "VCP" numbers, i.e. they are mapped relative to the parental sequence SEQ ID NO: 5.

As described on page 72, lines 28-30 and continued on page 73, lines 1-10 in the specification, SEQ ID NO: 11 comprises "a gp120 where the V3 deletion is ΔV3(6,6) and further wherein the compensatory mutation is at least one of an amino acid substitution selected from the group consisting of an amino acid substitution from isoleucine to valine at amino acid residue number 55, an amino acid substitution from asparagine to aspartic acid at amino acid residue

number 79, an amino acid substitution from threonine to lysine at amino acid residue number 202, an amino acid substitution from threonine to isoleucine at amino acid residue number 231, an amino acid substitution from alanine to threonine at amino acid residue number 267, and an amino acid substitution from asparagine to aspartic acid at amino acid residue number 391, wherein the amino acid residue number of the compensatory mutation is relative to the amino acid sequence of parental HIV-2/vcp gp120 as provided in SEQ ID NO:5. Such combination of V3 deletion and compensatory mutations is exemplified by the HIV-2 p16.5 clone gp120. The amino acid sequence of this clone is depicted in Figure 22C (SEQ ID NO:11)."

The compensatory mutations in SEQ ID NO: 11 are as follows: Ile to Val at residue 55; Asn to Asp at residue 79; Thr to Lys at residue 120; Thr to Ile at residue 149; Ala to Thr at residue 185; and Asn to Asp at residue 291.

Applicants include the following table summarizing these mutations in a further effort to clarify these mutations in SEQ ID NO: 11.

SEQ ID NO: 11 Residue number	**Compensatory mutation in SEQ ID NO: 11**	**VCP residue number**	**VCP residue**
55	Val	55	Ile
79	Asp	79	Asn
120	Lys	120	Thr
149	Ile	202	Thr
185	Thr	231	Ala
291	Asp	391	Asn

In view of the amendment of claim 12 and clarification of the mutations encompassed by SEQ ID NO: 11 as recited in claim 16, Applicants submit that the rejection of claims 12 and 16 under 35 U.S.C. § 112, second paragraph has been overcome and respectfully request withdrawal of same.

Summary

Applicants respectfully submit that the amendments made to claims herein do not introduce new matter and that the pending claims are in condition for allowance. Therefore, notification of allowance of the pending claims at the earliest possible time is respectfully requested.

Respectfully submitted,
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Date

By: _____

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